

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Tidewater Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Shorewood Packaging Corporation
815 Chapman Way, Newport News, Virginia
Permit No. VA-60913

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Shorewood Packaging has applied for a Title V Operating Permit for its Newport News facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____

Date: 11/14/07

Air Permit Manager:_____

Date: 11/14/07

Regional Director:_____

Date: 11/14/07

FACILITY INFORMATION

Permittee

International Paper
6420 Polar Avenue 5-019
Memphis, TN 38197

Facility

Shorewood Packaging Corporation of Virginia
815 Chapman Way
Newport News, VA, 23608

County-Plant Identification Number: 51-700-00066

SOURCE DESCRIPTION

NAICS Code: 323111 - Rotogravure and Lithographic Packaging Printing

The facility is a commercial printing operation using three centers of packaging rotogravure and lithographic presses to manufacture folding cartons.

Production Center: the two packaging rotogravure presses, each using a total enclosure that is connected to the Production Center catalytic incinerator for VOC/HAP control.

Technical Center: the one packaging rotogravure press, which includes a coating station, that uses a total enclosure connected to the Technical Center catalytic incinerator for VOC/HAP control.

Lithographic Center: the three non-heatset sheet fed offset lithographic presses that use conventional inks, UV inks, and water based coatings

The facility is a Title V major source of VOC and HAP. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility was previously permitted under a Minor NSR Permit issued on November 8, 2002, and amended on April 21, 2003, February 10, 2004, and July 10, 2007.

Sections V, VI, and VII of the Federal Operating permit that list the MACT requirements for RGP 1, 3, and 4 did not change. For, whichever press is RGP-1, the MACT requirements remain the same in the NSR permit and the Federal Operating permit (The NSR permit date in the citation section of each condition was only updated with the new NSR permit date.).

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Production Center							
RGP-1	1a & 1b	Packaging rotogravure press, Bobst Champlain, Model M873. 2003	Ten Rotogravure stations, web width of 44 inches, and rated at 600 ft/min.	Catalytic incinerator, Grace TEC Systems, Model Mangnum Quantum 41000. 1995	CI-1	VOC/HAPS	07/10/07
RGP-3	1a & 1b	Packaging rotogravure press, Bobst Champlain, Model M873 with electron beam curing option. 1982	Nine stations, web width of 44 inches, and rated at 600 ft/min, with electron beam drying option.	Catalytic incinerator, Grace TEC Systems, Model Mangnum Quantum 41000. 1995	CI-1	VOC/HAPS	07/10/07
Technical Center							
RGP-4	2	Packaging rotogravure press, Chambon, Model 176-597. 1994	Eight stations, web width of 13.5 inches, and rated at 550 ft/min.	Catalytic incinerator, M & W Industries. 1994	CI-2	VOC/HAPS	07/10/07
Lithographic Center							
LP-1	N/A	Lithographic press, KBA 130 Planeta. 2002	Non-heatset sheet fed offset lithographic press consisting of eight print units and two coating units, a sheet width of 51 inches and rated at 15,000 sheets/hr. Can	N/A			07/10/07

			use UV inks.				
LP-2	N/A	Lithographic press, KBA Planeta Rapida, Model RA 130A-7 + LALW. 1997	Non-heatset sheet fed offset lithographic press consisting of seven print units and one coating unit, a sheet width of 51 inches and rated at 15,000 sheets/hr.	N/A			07/10/07
LP-3	N/A	Lithographic press, KBA Planeta Rapida, Model RA 130-7 + L-ALV. 1998	Non-heatset sheet fed offset lithographic press consisting of seven print units and one coating unit, a sheet width of 51 inches and rated at 15,000 sheets/hr. Can use UV inks.	N/A			07/10/07

EMISSIONS INVENTORY

A copy of the 2006 annual emission update is attached. Emissions are summarized in the following tables:

2006 Actual Emissions

	Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO ₂	PM ₁₀	NO
RGP 1 and 3	10.7 tons				
RGP 4	0.4 tons				
Lithographic Presses 1-3	37.1 tons				
Total	54.9 tons	--	--	--	--

2006 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Year
N/A	N/A

EMISSION UNIT APPLICABLE REQUIREMENTS – Production Ctr/Tech Ctr (RGP 1, 3, 4)

Limitations

The following limitations in the Title V permit are requirements from the Minor NSR Permit issued on July 10, 2007.

The VOCs from RGP 1, 3, and 4 shall be controlled by a total enclosure capture system and catalytic incinerators (CI-1 and 2).

Each total enclosure shall meet the following criteria:

- a. Any natural draft openings shall be at least 4 equivalent opening diameters from each VOC emitting point;
- b. The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;
- c. The average facial velocity of air through the natural draft openings shall be at least 200 feet per minute and the direction of flow shall be into the enclosure;
- d. All access doors and windows shall be closed during routine operation of the presses

The inlet temperature of the catalytic incinerators shall maintain a minimum temperature of 550° and a maximum outlet temperature of 1200 °F.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Federal Operating Permits for Stationary Sources – Permit Content
9 VAC 5-50-260	Standard for stationary sources
9 VAC 5-170-160	Conditions on approvals
9 VAC 5-80-1180	Standards and conditions for granting permits
9 VAC 5-80-1210	New Source Standard for Permit invalidation, suspension, revocation and enforcement
9 VAC 5-20-180	Facility and control equipment maintenance or malfunction
9 VAC 5-80-1240	Transfer of permits
9 VAC 5-80-150	Action on permit application
9 VAC 5-170-160	Conditions on approvals
9 VAC 5-40-90	Standard for fugitive dust/emissions
9 VAC 5-50-90	Standard for fugitive dust/emissions
40 CFR 63, Subpart KK	National Emission Standards for the Printing and Publishing Industry

See also NSR permit issued 07/10/2007

CAM Plan

A CAM plan is required because the facilities potential uncontrolled VOC emissions from the rotogravure presses are above the major threshold, uses control devices on the rotogravure presses, and are subject to an emission limit. The facility was required to submit a CAM plan as part of the renewal process.

Monitoring

Each catalytic incinerator shall be equipped with a device to continuously measure and record the inlet and outlet temperature to and from the catalyst bed.

From a material balance of all products used by the three packaging rotogravure presses (RGP 1, 3, and 4) and Material Safety Data Sheet (MSDS) for the products, the permittee shall calculate the monthly and annual throughput of VOC materials and the VOC emissions, except as required by Conditions II.B.19.a, to demonstrate compliance with Conditions III.A.7 and 8. If VOC content is given as a range, the maximum value shall be used. The annual emissions are the sum of each consecutive 12-month period.

On a monthly basis, the permittee shall inspect each permanent total enclosure for the four packaging rotogravure presses (RGP 1-4) and note any changes that have been made since the last permanent total enclosure certification was conducted.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110 Federal Operating Permits for Stationary Sources – Permit Content
See also NSR permit issued 7/10/07.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include yearly throughput and emissions of VOCs and HAPs, MSDS sheets, Maintenance schedule, spare parts list, records of inlet and outlet hourly average temperatures for the catalytic incinerators, results from monthly permanent total enclosure inspections, and results from any conducted performance tests.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110 Federal Operating Permits for Stationary Sources – Permit Content
9 VAC 5-50-50 Notification, Records and Reporting
9 VAC 5-20-180 Facility and control equipment maintenance or malfunction
See also NSR permit issued 7/10/07.

Testing

The permit does not require source tests. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.

Reporting

The permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports which shall include:

1. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
2. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
3. A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

EMISSION UNIT APPLICABLE REQUIREMENTS – Lithographic (LP 1-3)

Limitations

Volatile organic compound (VOC) emissions from the three non-heatset sheet fed offset lithographic presses (LP 1-3) shall be controlled by the use of conventional inks (42% or less VOC by weight), UV inks, water based coatings (10% or less VOC by weight), and isopropyl alcohol fountain solution at 10% or less VOC by weight.

The throughput of conventional offset inks for the three sheet fed offset lithographic presses (LP-1 – 3) shall consume no more than 1474.2 tons per year.

The throughput of conventional washers and cleaners for the three sheet fed offset lithographic presses (LP 1-3) shall not exceed 30.9 tons per year.

The throughput of UV washes for two sheet fed offset lithographic presses (LP-1 and LP-3), shall not exceed 19.5 tons per year.

The throughput of isopropyl alcohol added to the fountain solution for the three sheet fed offset lithographic presses (LP 1-3) shall not exceed 50.5 tons per year.

The throughput of water based coatings for the three sheet fed offset lithographic presses (LP 1-3) shall not exceed 1305.7 tons per year.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Federal Operating Permits for Stationary Sources – Permit Content
9 VAC 5-50-260	Standard for stationary sources
9 VAC 5-170-160	Conditions on approvals
9 VAC 5-80-1180	Standards and conditions for granting permits
9 VAC 5-80-1210	New Source Standard for Permit invalidation, suspension, revocation and enforcement
9 VAC 5-20-180	Facility and control equipment maintenance or malfunction
9 VAC 5-80-1240	Transfer of permits
9 VAC 5-80-150	Action on permit application
9 VAC 5-170-160	Conditions on approvals
9 VAC 5-40-90	Standard for fugitive dust/emissions
9 VAC 5-50-90	Standard for fugitive dust/emissions

See also NSR permit issued 07/10/2007.

Monitoring

From a material balance of all products used by the three lithographic presses (LP 1-3) and Material Safety Data Sheets (MSDS) for the products, the permittee shall calculate the monthly and annual throughput of VOC emissions.

If any monthly monitoring indicates that VOC emissions are equal to or greater than 50% of the allowable limit, the VOC content of each VOC material used shall be determined the next calendar quarter using Reference Method 24 or 24A (40 CFR 60, Appendix A) and such determined VOC content shall be used for the purpose of calculating throughput and emissions. VOC content testing shall be conducted by the permittee or the supplier may provide a manufacturer's certificate of VOC content of the batch as supplied for each formulation of material received after such emissions threshold has been achieved. Each VOC material shipment received shall be clearly identified by a product formulation number which may be correlated to Method 24 or 24A test results. The most recent test results of VOC content for each formulation shall be used in the emission calculations. Quarterly testing may be discontinued after actual coating VOC emissions are below 50% of the allowable limit for three consecutive months. If quarterly testing is discontinued, the VOC content determined in the latest test or manufacturer's certificate for each formulation may be used in lieu of the MSDS value in throughput and emission calculations.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Federal Operating Permits for Stationary Sources – Permit Content
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See also NSR permit issued 7/10/07.

Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to

demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

1. Records of inlet and outlet hourly average temperatures for the catalytic incinerators;
2. Records of the manufacturers recommendations for catalyst bed replacement;
3. Records of catalyst replacement;
4. The yearly throughput (in tons) of the following materials for the Litho Center:
 - a. Conventional offset inks;
 - b. Press/roller/blanket washes;
 - c. UV washes;
 - d. Isopropyl alcohol;
 - e. Water based coatings; and
 - f. Yearly is calculated monthly as the sum of each consecutive 12-month period.
5. Material Safety Data Sheets for materials used by the gravure and litho presses that display the VOC by weight for all the materials used in the presses; and
6. Yearly VOC emissions shall be calculated monthly for the conventional inks, press/roller/blanket wash, UV wash, isopropyl alcohol, and water based (acrylic) coatings used by the three litho presses (LP 1-3).

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Federal Operating Permits for Stationary Sources – Permit Content
9 VAC 5-50-50	Notification, Records and Reporting
9 VAC 5-20-180	Facility and control equipment maintenance or malfunction

See also NSR permit issued 07/10/2007

Testing

The permit does not require source tests. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with

procedures approved by the DEQ.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".

This general condition cite(s) the Article(s) that follow(s):
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80	Application
9 VAC 5-80-140	Permit Shield
9 VAC 5-80-150	Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-41	Emissions Monitoring Procedures for Existing Sources
9 VAC 5-40-50	Notification, Records and Reporting
9 VAC 5-50-50	Notification, Records and Reporting

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50	Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190	Changes to Permits
9 VAC 5-80-260	Enforcement
9 VAC 5-80-1100	Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790	Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000.	Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180	Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110	Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5-50-310	Odorous Emissions
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INAPPLICABLE REQUIREMENTS

New Source Performance Standard (NSPS) Requirements for Publication Rotogravure Printing in 40 CFR Part 60, Subpart QQ. The source has no publication rotogravure printing presses.

The MACT standard for halogenated solvent cleaning in 40 CFR Part 63 Subpart T is not currently applicable. The facility does not use any halogenated cleaning solvents in its parts washers.

STREAMLINED, OBSOLETE, AND REDUNDANT REQUIREMENTS

The following conditions from the February 10, 2004 permit are not included in the TV permit. The reason for not including each condition is listed beside each condition number.

Specific Conditions:

25 – initial stack testing has been completed.

27 – initial notification has been completed.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C 2)
101	Gravure ink/coating storage room	9 VAC 5-80-720.A.57	VOC	
102	Litho Ctr solvent storage room	9 VAC 5-80-720.A.42	VOC	
103	Solvent storage tank farm, each tank less than 1000 gal	9 VAC 5-80-720.A.42	VOC	
105	Gravure Dept parts washer	9 VAC 5-80-720.A.38	VOC	
106	Gravure ink coloring & dispensing system	9 VAC 5-80-720.A.54	VOC	
107	Product quality control storage area (hot house)	9 VAC 5-80-720.A.46	VOC	
108	Cyclone paper baler system	9 VOC 5-80-720.B.1	PM	
110	Boiler # 1, nat gas only	9 VAC 5-80-720.C.2.a		4.2 MM Btu/hr
111	Boiler # 2, nat gas only	9 VAC 5-80-720.C.2.a		5.1 MM Btu/hr
	Maintenance Lubrication Distribution Center	9 VAC 5-80-720.C.3	VOC	

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the The Virginian-Pilot from September 28, 2007 to October 29, 2007.